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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,292	02/28/2002	John Bieda	VEL-464-A	1117

7590 07/01/2004

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EXAMINER
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SUN, XIUQIN

ART UNIT	PAPER NUMBER
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2863

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/085,292	<b>Applicant(s)</b> BIEDA ET AL.	
	<b>Examiner</b> Xiuqin Sun	<b>Art Unit</b> 2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 April 2004 and 10 May 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11, 13-16, 18-27, 29 and 31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10, 11, 16, 18-27, 29 and 31 is/are allowed.
- 6) ☒ Claim(s) 1-9, 14 and 15 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Upon further consideration, the allowable subject matter of claim 12 as indicated in the last Office Action mailed on 04/15/2004 has been withdrawn and replaced by the following office action. Any inconvenience to the Applicant(s) is regretted.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-9, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nasr et al. (U.S. Pub. No. 20020023251) in view of Lech et al. (U.S. Pat. No. 6539271).

Nasr et al. teach a method of determining product performance comprising the steps of (Fig. 2): collecting product performance data (sections 0048 and 0076); determining the failure mode of detected product failures (sections 0080, 0081, 0085 and 0106); conducting a failure mode effect and analysis procedure to determine a degree of risk of a detected failure (sections 0009 and 0080-0111); and developing corrective action to correct the detected failures (sections

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0012, 0013 and 01112). Nasr et al. further teach the steps of: determining the severity of the effect of each failure (sections 0080, 0081 and 0091); and determining the frequency of occurrence of the effect of each failure (sections 0080, 0081 and 0092); ranking the determined severity of effects of a plurality of different detected failures to generate a plurality of different severity ranking values (sections 0093, 0104 and 0105); and ranking the determined frequency of occurrences of a plurality of different failures in ranked frequency of occurrence values (sections 0093, 0104, 0105 and 0124); determining a preliminary risk assessment of each failure as a product of the ranked severity value and the selected ranked frequency of occurrence value (sections 0009, 0080-0082, 0093, 0095, 0104, 0105 and 0107); comparing the preliminary risk assessment with a threshold to determine high risk assessments (section 0105); determining the root cause of detected product failures for product failures having a preliminary risk assessment at least equal to a threshold (sections 0081, 0086, 0092, 0097 and 0102); assigning a severity rank value to the each failure effect (sections 0093, 0104 and 0105); and assigning a rank value to the determined frequency of occurrence of each failure effect (sections 0093, 0104, 0105 and 0124); verifying the corrective action (sections 0108, 0118, 0119, 0123 and 0125); ranking a validation of a failure corrective action based on at least one of the type of validation test, the sample size and the test time (sections 0108; 0118, 0119 and 0141); determining the cost of quality assessment (sections 0118-0120 and 0141); and determining the total cost of quality assessment by the sum of

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prevention costs, appraisal costs and failure costs (sections 0118-0120, 0126, 0129, 0130 and 0141).

Nasr et al. do not mention explicitly that: forming a plurality of selectable databases containing product performance data for at least two of field performance, product change request, manufacturing performance, validation performance, prototype and pilot build inspection, measurement system performance, simulation, supplier development performance, process control, production process capability performance, manufacturing preventive maintenance, engineering development test performance, lessons learned, engineering calculations, dimensional tolerance stack-up analysis, internal/external part interface analysis, new customer requirement, supplier requirement, cost improvement, drawing change and tool wear.

Lech et al. disclose a quality management system, and teach: forming a plurality of selectable databases containing product performance data for at least two of field performance, product change request, manufacturing performance, validation performance, prototype and pilot build inspection, measurement system performance, simulation, supplier development performance, process control, production process capability performance, manufacturing preventive maintenance, engineering development test performance, lessons learned, engineering calculations, dimensional tolerance stack-up analysis, internal/external part interface analysis, new customer requirement, supplier requirement, cost improvement, drawing change and tool wear; determining the

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failure mode of detected product failures; conducting a failure mode effect and analysis procedure to determine a degree of risk of a detected failure; and developing corrective action to correct the detected failures (col. 1, lines 63-67; col. 2, lines 1-7 and 21-34; col. 4, lines 6-67; col. 5, lines 1-49; col. 6, lines 60-67 and col. 7, lines 1-5).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teachings of Lech et al. in the invention of Nasr et al. in order to provide a method having sufficient degree of sophistication for quality management which is not only retroactive but also proactive to provide continuous improvement to all areas of industry (Lech et al., col. 1, lines 51; col. 2, lines 66-67 and col. 3, lines 1-12).

#### ***Allowable Subject Matter***

4. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 10, 11, 16, 18-27, 29 and 31 are allowed.

#### ***Reasons for Allowance***

6. The following is an examiner's statement of reasons for allowance:

The primary reason for the allowance of claims 10-11, 21-22, 23-27 and 29 is the inclusion of the method step of determining a final risk assessment for

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each corrective action equal to a product of the determined severity value, a determined frequency of occurrence value and a determined failure correction validation value. It is this step found in each of the claims, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

The primary reason for the allowance of claim 13 is the inclusion of the method step of forming summary statistics of product performance failures for each selected product performance data database. It is this step found in the claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes the claim allowable over the prior art.

The primary reason for the allowance of claims 16, 18-20 and 31 is the inclusion of the method steps of defining the threshold as a severity value at least equal to one ranked severity value; and comparing the final risk assessment value with the threshold to determine failures requiring corrective action. It is these steps found in the claim, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which make these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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**Contact Information**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiuqin Sun whose telephone number is (571)272-2280. The examiner can normally be reached on 6:30am-4:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571)272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
XS

June 21, 2004

Xiuqin Sun  
Examiner  
Art Unit 2863

  
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